

**Water and Well-being:
Explaining the gap in official and displaced people's understandings of water**

Lyla Mehta
Institute of Development Studies
University of Sussex
Brighton BN1 9RE
UK

Anand Punja
Independent Researcher
London, UK

**Forthcoming, in Baviskar, Amita. (ed).
The Cultural Politics of Water. OUP.**

Water and Well-being

“The oustees are far better off in the resettlement site. The women do not have to face the same drudgery they did in the jungle because they have taps near their homes. Their health has also improved. They are better off than before.”

Resettlement Official

“We are very unhappy since we’ve moved to the resettlement site. The water supply is very irregular and it tastes awful, too. Our babies are dying and we feel weak and sick. Away from the forest and river economy, we feel worse off.”

Tadvi woman in resettlement site, Malul

These quotes, one from a resettlement official, and the other from a displaced woman, are talking about the same water situation in the same village. Yet, the gap in perceptions about both water and well-being is glaring in the debates surrounding displacement processes associated with the controversial Sardar Sarovar Project (SSP) in Gujarat, India. The official believes that having a water standpoint four meters away from the home is a definite improvement to the long trudge to the river. He also feels that the “tribals” health has improved due to medical facilities being provided free of cost. By contrast, the Tadvi resettler misses the river. The long walk over the hills is not something she found difficult. After all, she could determine how often she filled water and when. And the water quality was *meetu* (sweet) and clean and she and her family felt healthier. She articulates a sense of declining well-being.

This paper examines the changing water world of resettled women and men who were displaced from their forest villages on the banks of the Narmada River to a small resettlement site in the plains of Central Gujarat. In attempting to explain why there is such a gap between official and displaced people’s perceptions of the water situation, the paper attempts to chart explicit links between water and well-being. It also argues that dominant models of water and well-being tend to mould official discourses concerning displacement which ignore the multi-faceted dimensions of both water and well-being (see figure 1). It is

these models that serve to legitimise both forced displacement processes and the controversial project.

Water, Well-being and Displacement Processes

The term poverty is a “portmanteau term” (Baulch 1996: 2) that has distinct meanings to different people. Understanding poverty ranges from the traditional income/ consumption approaches to those that focus on issues of vulnerability, lack of self-respect and powerlessness (Baulch 1996; Kabeer 1996). Well-being, in the traditional approach, is often defined as physical needs deprivation due to private consumption shortfalls (largely with respect to food) (Schaffer 1996:24). By contrast the more participatory and qualitative approaches would focus on a much broader conception of ill-being/ deprivation including, ‘physical, social, economic, political and psychological/ spiritual elements’ (Chambers 1995: vi). Thus, sources of both well-being and ill-being include income and non-income sources of entitlements, social relations of consumption and production and the more qualitative aspects of security, autonomy, self-respect and dignity.

The latter more holistic concept of well-being is at the core of the work of authors such as Amartya Sen (1999, 1993). For example, Sen argues that even though it is common to “use incomes and commodities as the material basis of our well-being...what use we can respectively make of a given level of income, depends crucially on a number of contingent circumstances, both personal and social.” (1999, 70). Hence, well-being is firmly anchored in a particular social and personal context. This is why Sen advocates- for evaluative purposes in particular- the “capability approach” as a means to measure well-being. This approach focuses on “substantive freedoms- the capabilities- to choose a life one has reason to value” (1999, 74, 1993, 1985). Thus at the heart of this approach one must look at the freedoms that an individual can enjoy. Thus development, according to Sen is a process of expanding the real freedoms that people enjoy (1999, 3)

In this broader sense, well-being should increasingly be understood as a multidimensional phenomenon ranging from income to the public provision of goods and services, access to

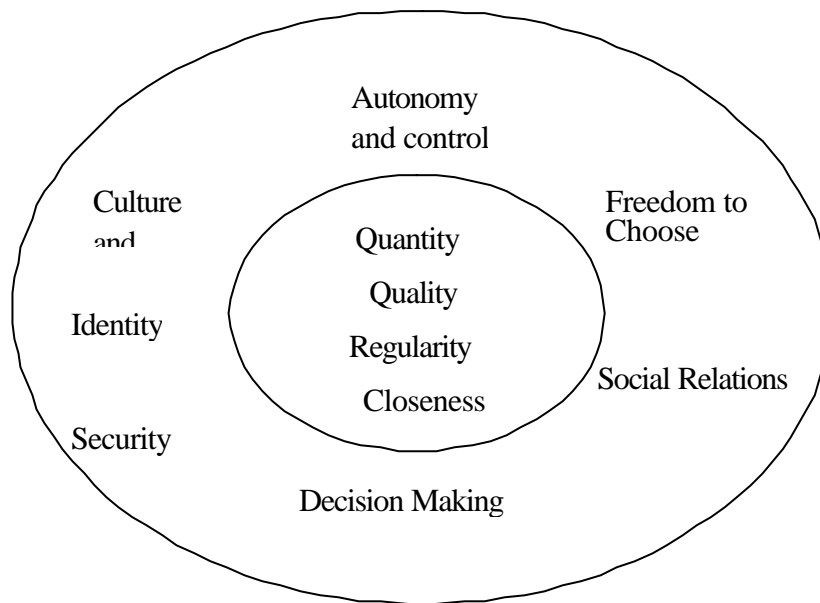
common property resources and other intangible dimensions such as clean air, water, dignity, self-respect and autonomy (Razavi 1999). Unfortunately, conventional approaches viewing poverty/ well-being/ ill-being still focus on the consumption of traded goods or incomes. They ignore natural resources and the consumption of non-monetary goods and services (e.g. Baulch 1996; Razavi 1999), along with the socio-cultural values that are placed upon them by individuals. Due to the close links between infrastructure projects and dominant discourses of development, this trend of measuring well-being through tangible and material gains and losses, is also mirrored in many resettlement policies and programmes..

That displaced people face increasing ill-being and a decline in their standard of living has, of course, been well documented in the extensive literature on displacement and resettlement processes (e.g. Cernea 1997; Indra 1999; Scudder 1995; Macdowell 1997; Mehta and Srinivasan 1999). Many studies have discussed how vulnerable communities tend to be impacted by dams in ways that require an evaluation that goes beyond the monetary loss of land (Colson 1999; Thukral 1999; Parasuraman 1993). Recent work focusing in particular on the gendered dimensions of dams has argued that traditional cost-benefit analyses, which emerged to identify and measure the costs or profits emerging out of infrastructure projects such as dams, fail to capture intangible issues such as changes in socio-cultural identity and geographical space, crucial for a community's well-being (Mehta and Srinivasan 1999). Studies have also focussed on the changing access to and control over natural resources, in particular common property resources (CPRs). For example, the widely applied risk and reconstruction model of Cernea (1997) talks of eight impoverishment risks of displacement. These are identified as landlessness, joblessness, homelessness, marginalisation, food insecurity, increased morbidity and mortality, loss of access to CPRs and community disarticulation. However, apart from the odd paragraph or two on natural resources, Cernea's approach has not really mapped out the far-reaching implications of the loss of certain resources. He also focuses more on the material, rather than the symbolic and cultural dimensions of resources, therefore reinforcing the conventional one-dimensional materialistic evaluative approaches that are commonly used ¹.

¹ Furthermore, the model treats the community in a rather undifferentiated manner. There is no adequate analysis of social differentiation within the community arising due to gender, caste, class etc.

In this paper, we view water as a life-giving resource having material, symbolic and cultural values used by different social actors for different social, political and economic purposes (cf. Nyerges 1997). Figure 1 highlights the multidimensional aspects of water and its relationship to well-being. The inner centre represents the more conventional ways of evaluating water and well-being due to the focus on aspects such as regular provision and adequate quality. The outer circle represents the more multidimensional aspects of water and well-being such as autonomy, links with identity and the freedom to choose. Our analysis explores both representations of the water/well-being nexus in the Narmada context to argue that it is necessary to focus on the broader capabilities approach if well-being is to be measured in a fair manner. As traditional riverbed communities move from river basins to settlements in plains, they experience dramatic changes in water quality and quantity. These have both tangible and intangible implications for a resettler's livelihood options, health, socio-cultural identity, daily routine and social relations. By using the case of Malu, a resettlement site in Gujarat, we examine how the changing water world of displaced people in Gujarat has led to a decline in their sense of well-being because the once taken-for-granted freedoms around water- central to their life-have been taken away. However, bureaucrats and policy-makers focusing on conventional understandings of water and well-being (represented by the inner core in figure 1), neglect or even wilfully ignore displaced people's subjective sense of ill-being (see the outer core in figure 1). In the case study of Malu, a village in Vadodara district Gujarat, the absence of the river and the poor water situation is one of their main causes of ill-being to which we now turn.

Figure 1:- The Multidimensional Aspects of Water/ Well-being



The Changing Water World of Resettlers in Malu

The SSP is one of the most controversial dam projects of the world, not least because it is likely to cause the forced displacement of about 250,000 people in Gujarat, Maharashtra and Madhya Pradesh.² A very high percentage of this population is Adivasi (tribal). The adivasi groups relevant for this paper are the Tadvis and the Vasava, who fall under the generic category of 'Bhil'. For reasons of space, it is not possible to discuss differences between Tadvis and Vasavas or, indeed, all the many debates around 'tribe' and caste in India³. However, for purposes of this paper it suffices to say that the Tadvis have always been more exposed to the outside world, consider themselves to be superior to the Vasavas and had already seen themselves as Hindu, even in the submergence village. By contrast, the Vasavas, had less exposure to the outside world. Their dialect, dress patterns and customs have changed dramatically over the past decade since resettlement and the induction into the

² For details on debates of the SSP see Fisher 1995; Dreze et al 1997; Morse et al 1992

³ There are many arguments in the SSP debate about the extent to which these groups can be called 'tribal', see for example, Dreze et al 1997. See the following for information on Tadvis and Vasavas. CSS Various; TISS various.

market-based economy and caste Hindu society has had more profound impacts on the Vasavas than on the Tadvis (cf. Hakim 1997; CSS various).

The contrast between Gadher and Malu is striking. Gadher was a sprawling village spread out over the river valley with fields and houses scattered over the hills and forest. By contrast, Malu, even after ten years is still a resettlement site (*vasahat*) with little or no tree cover and half-complete houses situated close to each other in grim unaesthetic lines. Indeed one could argue that this simple physical arrangement of housing by the government is a method of control. In Gadher, livelihoods were far more diversified with the forest, land, river and livestock playing an important role in the subsistence-oriented economy with its few market-based linkages. In Malu, most people make their livelihoods through agriculture. Forest-based work, fishing and extensive grazing, so prevalent in Gadher, are largely absent. The monetisation of goods and services has led to dramatic changes and most resettlers still complain that money is always short. The increased interaction with the market has provided a greater choice of goods and services, but this has also led to an increase in wants over needs, especially amongst the younger generation. Understandably this has led to changes in the importance of the subsistence economy. Calculated decisions have to be made whether the average five acre plot should be used to feed the family by sowing grains or to increase monetary incomes by sowing commercial crops such as cotton with which to pay for goods and services. As one Vasava man articulates “if we grow cotton we have money but no grains, but if we grow grains we have no money”.⁴

Changing Access to and Control over Water

In Gadher, the main source of water for the village was the river Narmada. Women would spend up to three to four hours a day in a number of trips. Trips were made as and when necessary and the distance walked could be as far as three kilometres. Water was collected largely for domestic purposes. By contrast, tasks such as the washing of clothes, bathing and the watering of livestock were usually performed at the river. Hamlets far away from the

⁴ Malu is located in Baroda district and has a population of 596 people out of which 371 are Vasavas, 220 are Tadvis and five are Rohits.

river also had access to a hand pump, streams and various wells. These provided a good supply of water due to abundant groundwater levels in the hills.

In Malu, there are many more sources of water, though the supply is not as reliable. There are about twelve standpoints near the houses (each with three taps though many of the taps do not function), four handpumps (three of which are not working) and water from a government tanker. A village pond is shared with the host villagers, which can be used to water livestock in the monsoon. A handpump in the host village of Malu is located about two kilometres away from the resettlement site and is used when none of the local sources has water.

The quality of water is defined into 3 categories: *Meetu pani* (sweet water which is of the best quality), *Moru pani* (bland water, but drinkable) and *Kharu pani* (salty water, that is undrinkable and does not quench one's thirst). Not one of the sources in the resettlement site is considered sweet. The only accessible sweet source is the handpump in the host village and the settlers are hesitant to use it because it causes friction between them and the host village. Recently reliance on this source has increased due to the avoidance of standpoints due to poor water quality. The water that flows through the standpoints and comes via the tanker is defined as bland and the water from the settlement's one and only functioning hand pump has the poorest quality. Apart from not quenching one's thirst, it is even inappropriate for bathing as is evident from the advice of an elderly Tadvi man. "Do not use that water for bathing,. It is sticky salty and your skin will become dry." For the villagers this handpump (although vital due to the inconsistent supply of the other sources), is a reluctant last resort. By contrast Narmada water, as they remember it, was always sweet.⁵

Flowing water is available only for about twenty minutes a day and anytime between 6.30 a.m. to 10 a.m. The standpoints are fed by two wells: one is owned by the Sardar Sarovar Resettlement Agency (henceforth Nigam) and the other one is contracted to it. Both wells are operated by powerful men in the host community. Resettlers have little control over the

⁵ Now, however, giving the damming of the river, the water quality is no longer so good. Residents along its bank complain of silt, worms and illnesses.

operation or maintenance of these sources or indeed the quantity of water available daily. For example, in January 2000 a new bore was to be installed for the resettlers. No consultation was taken place regarding its location. After a week of incessant digging and trials, it was decided that the pressure of the water was inadequate and the site was abandoned. Had the residents of Malu been consulted, they would have chosen another site where the probability of striking water was high. It would have been on land near the vicinity of existing wells and owned by a resettler in order to have a greater degree of control over its operation, something grossly lacking at the moment.

The advent of water is the highpoint of the day with many women crowded around a tiny trickle of water for a short while. Obviously, during these tense moments, many conflicts can ensue. The water situation in the Vasava quarter is even more precarious than that in the Tadvi quarter. There is even less regularity and Vasava women are often forced to go to the Tadvi quarter or to the host village for water.

The irregularity of the water supply has a tremendous bearing on the daily activities of men and women. If water does not arrive they are forced to look elsewhere and have less time for other tasks such as cooking and working in the fields. During busy work periods (e.g. harvest), the non-arrival of water leads to the necessity of hiring help. The largely erratic nature of the supply has led to water, once taken for granted element in the lives of the settlers to become one of their largest problems. A free flowing river, which gave them 24 hour access, has been replaced by a variety of unreliable sources that provide water for very short periods. The autonomy that women enjoyed in collecting water whenever they wanted has been lost. Instead, they are dependent on the government, host villagers and other people for their daily supply.

NGO workers, health officials and officials of the Nigam feel that women have benefited tremendously because they no longer have to walk long distances, as is evident from the quote at the beginning of the paper. Had the water sources been functioning and providing safe and adequate water, this might have been true. But, as Vasava women have pointed out, they also sometimes need to walk long distances to the host village and engage regularly

in battles with the host community over scarce water. To counter official views of drudgery, women have expressed the sentiment that they prefer the “drudgery” of their submergence village to the situation in the resettlement site. This is because of the daily uncertainty around water whose taste and quality is questionable. Thus even after ten years they remain nostalgic of the river. Indeed this nostalgia can be seen in the practice of older villagers who keep jars of Narmada water in their homes. Another way of interpreting the women’s views of drudgery would be that women would prefer less drudgery and more facilities in their ancestral homes rather than having to fight for them daily in the settlement, which for many has still not become home.

Settlers are convinced that the Nigram is indifferent to their needs vis-à-vis water. This belief is reinforced by the fact that Narmada water, released in February 2001 via pumps into the canal system, is still bypassing them, supposedly on its way to the ‘drought-affected’ areas of Kutch and Saurashtra⁶. As one educated resettler put it; “We can go out to work to buy food and clothes. But without water, we cannot live. We will die waiting for this water. Even now, the water of our mother Narmada is bypassing us. We need to move” (Tadvi Male, 65).

The marked lack of a regular independent source of water causes tremendous anxiety. Many ask what will happen when the Nigram pulls out of the area. They do not believe that the village panchayat (which they share with the host community), will take care of them. The host villagers feel animosity towards them due to the perception that they receive preferential treatment from the Nigram. Thus panchayat facilities and funds are used for their own village. For example, in 2000 the block authorities sanctioned seven handpumps to be installed throughout the village (including the resettlement village). However, all of them were installed in the host village which now has twenty handpumps.

Changing Water Relations

⁶ The timing of the release was politically strategic, due to the poor government response in these areas after the earthquake in January 2001. Also, Rajkot, the town to which most water was diverted, was the home of the then Chief Minister, Kesubhai Patel. It is strongly believed that he was put under immense pressure by the powerful Patidar community of the area to deliver water to them regardless of the costs entailed.

Due to the importance that water plays in shaping people's daily schedule there have been many changes in social relations amongst women, between men and women, between Vasavas and Tadvis and between the host villagers and resettlers.

The 'doxa' (cf. Bourdieu 1977) around the gender-based division of labour around water in Gadher dictated that women were responsible for the collection of water and many other household chores. In Malu, in some cases this doxa seems to have become more relaxed. Although it is still primarily women who fill the water, there are many more instances in Malu where men help out in this task because of the limited time available to collect water. In some extreme cases, even fathers-in-law help their daughters-in-law collect water. This helpfulness is not necessarily due to the fact that men feel more compassion towards women's workloads, or indeed because there have been significant changes in the way they see the gendered division of labour. Given the limited time available for the collection of potable water men often help out in water collection in order to secure an adequate daily supply. Thus the scarcity of water has relaxed gender relations vis-à-vis water. This is because chores need to be done collectively in the limited time available. Men realise that if they do not help out there will just not be enough water for the household. This is one example of a positive change in gender relations, with men engaging in hitherto traditional 'female' tasks.

However social relations around water have also been rather conflictual in large households. In one of the largest households, there are complaints of fights between the five sisters-in-law over water. Although they live under one roof, they do not collect water together, because they identify themselves as autonomous families. This is in keeping with their life in Gadher when, after marriage, the son traditionally moved into a separate house. Such arrangements are impossible in Malu where there is no forest to generously provide teakwood to build new houses and where space is scarce. Besides, water shortages, impoverishment and low and poor agricultural yields have made the struggle for survival intense in Malu. Consequently, the collective pooling of resources is no longer possible and the nuclearization of families has become more pronounced. However, this atomisation takes

place amongst enhanced physical proximity. Several generations and families live under one roof, though they operate as separate economic units. Here water becomes a marker of difference: separate collection makes a statement about a family's separate identity in the now mixed household. Thus, the mere supply and collection of water encroaches on a person's time and space, giving rise to social and family tensions absent in the past.

The scramble for water has also thrown Tadvīs, Vasavas and host villagers together in water-related tasks. The standpoints are sites of both conflict and co-operation. Many Vasava women fill water from Tadvī standpoints and their turn is often last in the pecking order. On a good day, everybody can get the required water supply and Tadvīs share their water with the Vasavas. On bad days, Vasavas can leave with empty pots and need to look elsewhere. In some cases water has also become a marker of difference between some Vasavas and Tadvīs. As indicated above the Vasavas and Tadvīs receive water from different sources. In Gadher, everybody drank water from the Narmada. In Malu, people in the two quarters have become used to their 'own' water and prefer the water they get from their different sources.

The relationship between the host village and the settlement has improved significantly since the early years when the adivasis (especially the Vasavas) were ridiculed for their clothes, dialect and language. Much of this took place at water points, which are still the main sites around which interaction between the hosts and resettlers takes place. Now, both adivasis and the host villagers agree that the adivasis have gone through a process of *sudhar*, "reform", where, at least, superficially, they have adopted the dress patterns and customs of the host community⁷. This view of reform is based very much on a modernist view of *sudhar*. By contrast, in a 1905 dictionary *sudhar* was defined as going back to one's roots and becoming more independent (David Hardiman, personal communication). An elderly Vasava woman, whilst rushing off to grab some water from the tanker, took this view of *sudhar*: "How can they call this *sudhar*? We barely have our own food and water to survive. In Gadher there was enough for everybody. Even our land holdings have

⁷ Discussions of the various contestations around *sudhar* and what this means for adivasi women and men's identity are beyond the scope of this paper and will be discussed in forthcoming work.

decreased...we had about 15 acres in Gadher, here we have received only five.⁸ Largely, resettlers and the host villagers agree that the adivasis have undergone a process of 'reform'. Thus much of the early animosity towards the resettlers has lifted. However, host villagers still have the right to deny settlers access to water. Women report that conflicts around the handpump in the old village are not unusual. Host villagers feel that since the resettlers were brought there by the government they should ask the government for facilities and not take them away from the host village for, "The more they use the pumps, the less water we get and the more likely they are to break." (Male host Villager).

There is also some hostility towards the resettlers due to some of the extra facilities that they receive, such as tanker water. The tanker is filled from several private sources in and around the host village. It is paid for by the resettlement authorities to supply water to many of the resettlement sites in the local vicinity. According to the resettlers, hostility was more pronounced in 2000 due to the failure of the rains. The majority of the host village receives water from two piped sources. They get both sweet water and bland water, which they use for drinking water and washing/ bathing respectively. For this, they pay Rs 70 a year. They are resentful of the fact that the resettlers do not pay for water and also get additional facilities. Many have told us that their water situation is worse than the resettlers, and that if the government would displace them, they would happily give up their land if they were to receive the facilities that are provided to the resettlers. Clearly, the grass is greener on the other side and if confronted with relocation and displacement they might not express the same views. Indeed when questioned about the land given to the resettlers, even the hosts agree that the land given to the resettlers is of inferior quality. After all good quality land is unlikely to be sold given the prospect of canal irrigation. Effectively, poor soils have been given to the resettlers whilst most of the good soil has been kept within the host village. Thus if and when irrigation from the Narmada becomes a reality, it will be the owners of the superior soils that will reap the most benefits.

⁸ Here she is referring to forest land or wasteland which in the eyes of the state was deemed to be 'encroached.' Thus the so-called liberal package of five acres of land in the eyes of many resettlers does not compensate them for access to forest land, common property resources and land along the river-bed.

Understandably, resettlers do not view the facilities they have received positively. They feel that they have unnecessarily become dependent on the government to supply their most vital and needed resource, water. They have never experienced such a created dependence at any time before in their ancestral lands. In Gadher, they had the choice to fill when they wanted, how much they wanted, and with whom. From their point of view, water-related tasks have given rise to social relations that are occasionally conflict-ridden and lock them in relations of dependence with their hosts and the authorities. Thus the negative changes in their social relationships have led to a decline in autonomy for the resettlers, leading to a decline in freedoms and consequently well-being.

Water and Health

The resettlement literature acknowledges that the general health of a population can decline due to displacement (Cernea 1997). Causes include social stress, trauma, malnourishment, unsafe water supply and so on. These trends were observed during our fieldwork in Malu. People felt that the poor quality of water has led to chronic diarrhoea, dysentery, colds, nausea and so on. It has also led to an increase in mortality. The majority of households within Malu have lost family members in the village, especially children. For example, in the representative household survey we conducted, we found that all households had witnessed the loss of a child or grandchild in Malu, whereas only 50% had witnessed such grief in Gadher. It would be foolish to deny problems concerning low life expectancy and child mortality in the submergence villages, but research conducted by monitoring agencies such as the Tata Institute of Social Studies report that the health status in the submerging villages was significantly better than in the settlements (TISS 1997). While child mortality had taken place before, people believe its incidence has increased.⁹ For example our host family lost one son while living in Gadher, but since moving to Malu, the family has lost one teenage daughter, one fifteen year old son and one eleven month old granddaughter. The last two deaths took place during the fieldwork period (July 2000-December 2000) and were due to

⁹ We have tried to obtain figures for child deaths in Gadher for its last 10 years of existence, and compare them to the deaths for the last 10 years in Malu. Unfortunately due to Gadher no longer being officially recognised as a village, the statistics were unobtainable.

water-related diseases: jaundice with septicaemia and diarrhoea respectively.

The men, in particular, complain about the negative impact water has had on their immune system and the general fitness of their families. Resettlers say that due to the different types of water they consume, their bodies cannot get used to one type and thus fail to build up a strong immune system. During several interviews, people reminisced about how strong and healthy the children were in Gadher and that the boys would grow up to be strong, quick and agile. “There we could climb trees, chop wood and carry loads of up to 100 kg for about ten to fifteen kilometres; today we cannot even run one kilometre without becoming exhausted” (Tadvi male, aged 30, in conversation, whilst his child was in hospital). People also use the analogy of land and water to compare their health in Malu and Gadher. “There our kids were masboot (strong), just like our land; Here our kids and the land are both weak” (Tadvi male, 60).

The Nigam is seeking to improve the water quality by supplying chlorine tablets to the households in the settlement so that drinking water can be disinfected. Doctors complain that the tablets are not being used. This is true in some households because the taste of chlorinated water is very strong. Villagers, however, have never been explained the importance of dissolving the tablets into the water. They have not even been shown that the tablets are most effective when crushed and mixed into the water. If simply added to a vessel, the tablet sinks to the bottom without dissolving and has no disinfecting affect. Whilst talking to a scientist in the public health office in Baroda, it was brought to our attention that the tablets should be sealed when supplied to prevent the evaporation of chlorine. However, the tablets that are supplied to the resettlers are unsealed, and at the most, wrapped in newspaper, reducing their efficacy. This is a good example to show that the interventions undertaken by the authorities though well meaning, are pretty useless unless they are accompanied by consultation, follow up and feedback processes.

Many of the grassroots health workers believe that water is the cause underlying the increasing illnesses. They have filed reports about these problems but their advice has gone unheeded. Following villagers’ complaints and the paralysis of grassroots workers, we

collected water samples and had them tested by the Gujarat Pollution Control Board. All samples taken from all the settlement sources were found to be bacteriologically “unfit for drinking”. The Nigam sources were also found to be chemically “unfit for drinking” due to the over presence of fluoride and alkalinity. Our tests confirmed what the villagers have been saying all along, but still this was not enough evidence for the Nigam. The head of the Nigam, Mr Vinod Babbar, informed us in 2000 that “water is universally bad all over Gujarat and that the resettlers should stop complaining” (personal communication). Still, to placate us a health team was sent to Malu which according to the resettlers would not have visited the village, had we not been around. After hearing testimonies of how bad the water quality is (many people mentioned how the host villagers use the well as a rubbish tip, where even dead carcasses are thrown in), official water tests were conducted. The results confirmed the poor water quality, which led to the closure of the wells and water was given through tankers five times a day.

The doctors who visited the village insisted that the Health Cell (operational since 1999) has done wonders for the sites. They argue that resettlers are now paid regular home visits by the nurse; every oustee’s health status is registered on a form; chlorine tablets are handed out weekly and children are immunised regularly. From the resettlers’ point of view none of these interventions has led to an improvement in their health status. Their water problems have largely been ignored because health workers feel that water falls under the jurisdiction of the engineering department; the health workers and doctors are largely ignorant about adivasi life and culture and the former nutritional statuses of the resettlers. No health profiles exist about the original villagers, in this case Gadher. Thus the extension workers have assumptions about Adivasis health that are based on stereotypical notions (e.g. all Adivasis drink and smoke and are thus ill) rather than on context-specific knowledge of their changing health status.

This perception can be challenged as most tribal societies value items of drink, food and narcotics for inducing well-being (Mahapatra, 1990). Furthermore, the concept of health in almost all tribal societies is a functional one and not a clinical one, as is the case in western allopathic treatment. As Mahapatra argues, “A [tribal] man or woman is not usually

considered afflicted with some disease unless and until the individual feels incapable of doing normal work assigned to their respective age and sex in that culture” (1990, 4). This seems to be much the case for the people in Malu¹, as demonstrated by the quotes above. Because they can no longer perform their traditional functional tasks such as building their own house, or carrying heavy loads for a long time or indeed climbing trees, they feel their health has deteriorated. In Gadher, these problems may have cropped up too, but in Malu, where life is less active, these problems become more marked.

In the treatment of illnesses, tribal populations are strong believers in non-western medical systems. These beliefs however, “do not exist in isolation; rather [they are]... a part of their entire socio-cultural religious system” (Swain, 1990, 17). Healing takes place through knowledge “which is gathered/ learnt through traditional experience which they have learnt through trial and error”(ibid). Adivasi notions of healing are completely ignored by the Nigam’s Health cell which bases its knowledge on western clinical medicine and allopathic concepts of illness and diseases. There has been no attempt by the Nigam to try and understand, compliment and strengthen the traditional systems of health care that were used in Gadher, in order to make health care more accessible to resettlers both physically and psychologically.

If anything the government, through its health programme, is achieving even more control over the settlers’ lives, as can be seen by this quote; “In Gadher my Grandmother lived to a 100 years without ever taking a single tablet. Today children are given injections and tablets from the moment they are born, and the more they take them the more they need them” (Tadvi male, 30). Here we are reminded of Foucault’s notion of biopower (1977). Indeed it appears as though the Nigam uses its power and authority to assert control over people’s ‘bodies’ through medical discourses (that denigrate adivasi medicine and healing systems) and programmes (cf. Foucault 1980 170: 171). Through biopower, the Nigam has succeeded in establishing a hegemony of its own dominant discourse of water and health, which suppresses resettlers’ problems and perceptions. It also provides legitimacy and a self-sustaining character to their ever-increasing programmes and schemes.

Water and Livelihoods

The agricultural systems in Gadher and Malu are very different. Even though both villages resort to rain-fed agriculture, the villagers needed to adjust to issues concerning rainfall patterns, land/water relationships, cropping patterns and the use of pesticides and chemical fertilizers in Malu. In Gadher people grew a vast variety of crops ranging from *makai* (corn) to three types of *jowar* (*lal*, *moti* and *hybrid*) (sorghum), *bajra* (pearl Millet), *tuvar* (*split pea lentil*), *mug* (*moong*), grains such as *urad*, *kodra*, *bunti*, *bhedi*, *mor*, *kang*, *divelia*, *matia*, *rice*, some cotton and *tal* (*sesame*). As the land was hilly and stony, the run off of water was good. Land in Gadher was known as *Garam Jamin* (hot land) because it dried and warmed up quickly. The main crop was grown in the monsoons and harvested before winter, around Diwali . Due to the land type being very permeable, almost double the amount of rain is needed for a good harvest in Gadher. However, due to its location in the hills and by the river, the area attracts more rain cloud than Malu does. Even when the rains are not sufficient, harvests seem to be greater than what we saw in Malu. For example, three acres of land in Gadher can yield up to about eight quintals of cotton. Formally, one acre of land in Gadher produced between 1-6 quintals of jowar depending on the year. In Malu it was between 50Kg and 5 quintals (household survey results). In Malu during a similar drought period the yield was half that amount on approximately the same amount of land. This trend was common throughout the household survey conducted and indicates the high yields possible on the land in Sadher.

By contrast, land in Malu is considered cold (*thandi jamin*). Heavy rains are required because light rains do not permeate the soil. Water needs at least a week to soak into the soil and only then do agricultural operations begin. Hence, these lands are also more prone to water-logging. The land in Malu does not produce a monsoon crop. According to the residents this is due to the length of time it takes to warm up. All the harvests occur at various times during the winter months, starting from the cotton harvest between November and February, to the jowar and tuvar crop which fully harvests by February-March just before the festival of holi. The land produces only four crops as opposed to the many diverse crops in Gadher, which not only provided a nutritious balanced diet, but also a

change from the “monotonous” meals which they now eat (largely *jowar*, rice and *tuvar*). There was also much more seasonal variation. For example *jowar* was eaten in the summer because it has a cooling effect on the system, whereas *bajra* (pearl millet) was considered appropriate for the colder winter months. The more traditional grains of *kodra*, *bunti*, *bhedi* and *danger* were an important part of the resettlers’ diet in Gadher. These crops were vital in times of scarcity and drought due to their resistance to rot. Indeed, *bunti* grains can last up to 15-20 years if stored correctly. A few of the Vasava families in Malu still have grains harvested in the final few years in Gadher. We were amazed at how fresh they still looked. By contrast the host villagers, perceive the various crops to be “*jungli*” (wild) and are happy that they do not grow here in Malu. Their nutritional value and high diversity is not appreciated. But it is this lack of diversity in nutritional intake which probably explains why the resettlers complain of reduced immunity.

As the quantity of land available is not as extensive as it in Gadher (given the extensive use of forest and common property for cultivation in the old village), resettlers are much more reliant on the shop for food. However, their purchasing power is also low given the rising costs. They also have learnt to do without milk, ghee and the very many forest products that they got free of cost in the submergence village. During lean periods, they experience more difficulties than they did in Gadher. For example, in the year of fieldwork the penultimate rains, crucial for a good *jowar* harvest, failed. The villagers predicted a drought accompanied by forced out-migration, indebtedness and a shortage of cash. By contrast, the impact of droughts in Gadher was less severe. Fall back options such as forest herbs and roots, livestock produce, fishing etc. existed which are absent in Malu. Fodder is short even in the best of years in Malu but in a drought year the situation is dire. Many families were contemplating returning to Gadher, which even in times of drought could sustain livestock and provide forest produce to get through the lean period. In Malu villagers needed to rely yet again on fodder that will be given free of cost by the government. By contrast in Gadher in 2000 people were supplying fodder to the market (one family sold RS21,000 worth of grass), as well as sustaining their own cattle and that of the migrating pastoralists from different parts of Gujarat. In sum, Malu cannot offer people the same livelihood diversity and security that existed in Gadher.

Water and Socio-cultural Identity

According to local cosmology, the Narmada is Mata (mother) and even holier than the River Ganga. Legend has it that the mere sight of the river can absolve an individual of his or her sins.¹⁰ Hence the damming of the river was initially inconceivable for many of the area's inhabitants. "How can they [the state] dam a mother?" was a common question that one of us heard in Gadher about ten years ago. The river was useful for fishing, washing, bathing and riverbed cultivation in the summer. It also served as an artery for communication with relatives across the bank; it was the home to many holy temples and facilitated the transport of goods downstream (e.g. logs). The river was a kind of map that served as a point of reference for the people and connected its inhabitants with each other. It was also life giving and the origin of creation in some Adivasi knowledge systems (cf. Baviskar 1995), their reverence for her suffused their daily lives (ibid).

The loss of the river and its ecology has had a tremendous impact on the way people live in Malu. This paper has discussed many of the physical changes. Many of the activities undertaken by the river now have to be done in the house. For women this has taken away the times that they could leave the house, talk and spend time with their friends whilst working by the riverbed or in the forest, away from their men folk. Now the furthest many women go without their men is to the nearest source of water or fodder. The absence of the river has also meant that more water is needed within the house (approximately 30 litres per household member for all water related activities), but this has occurred at the same time with a supply that has its limits, unlike the limitless supply of the Narmada River.

For the older generation there is a greater attachment to the Narmada than their children and their grandchildren. Whilst older members feel like returning to Gadher and are still eloquent about the river, their children and grandchildren are likely to stay in Malu and make the best of what they have been given. The importance of the river to the elders is seen in our host's

¹⁰ By contrast, a bath is required in the Ganges for one's sins to be absolved.

household. They pray every morning to jars filled with Narmada water. This is almost to remind them of their daily ablutions by the river. Also every time they take a trip to the area, they bring back memories of their homeland through traditional grains or herbal medicine. Their children and grandchildren, however, do not keep Narmada water at home. However, they too, as a token of their respect, refused to touch food on the day we visited Gadher until they saw the river and paid homage to her. The visit to the river after eight years for them was a reconnection with who they were. As a Tadvi woman put it, “we feel happy near the river; our friends and relatives are also close by – In Malu we are far away from both our kinship circle and the river.” Thus, the river and its ecology was a crucial determinant in determining both the adivasis sense of space and identity. Kibreab (1999) recognises the importance of place as vital for a person’s well-being. He explores the importance of territorial-based identity as being critical to human well-being. By trying to transform the resettlers from ‘wild’ Adivasis to mainstream Gujaratis, the authorities have totally ignored the links a person has with her surroundings. The authorities have also not understood how the absence of the river and the forest and the significant changes in water and land uses has led to increasing ill-being for the resettlers.

Conclusions

The preceding sections discussed the water/well-being nexus. It was argued that the changing water world of the resettlers had led to profound (and largely) adverse consequences for health, livelihoods and the access to a safe and adequate supply of water. These in turn have led to a growing sense of powerlessness, dependence on the government, a lack of autonomy and increased control that the government has over the resettler’s life. Despite the obvious trends most officials, NGO workers (e.g. Arch Vahini, Centre for Rural Care) and even neighbours in the host village do not understand the resettlers’ sense of ill-being. Instead, they believe that displacement has led the adivasis out of the trap of poverty, drudgery and so on. Displacement, they claim, has led to *sudhar*, the reform of adivasis who have moved out of wilderness to civilisation.

It would however be wrong to portray the resettlers as mere passive victims of displacement. They have adjusted to Malu and Central Gujarat, “turned stony land into gold” as one resident of old Malu puts it and pursued many non-farm livelihood strategies, the details of which cannot be handled here¹¹. Much of this, however, has been with little or no outside help, notwithstanding the inadequate compensation package. Largely, most of the people whom they interact with, be they neighbours, authorities or grassroots workers do not understand their sentiments of ill-being. Why?

The neighbours in the host communities are envious and jealous of the attention that the oustees are receiving and unaware of their previous life. Understandably feel that the resettlers’ lot is better than theirs. To combat this they reinforce their identity as mainstream Gujaratis in the presence of the resettlers and even try to force it upon them. . The grassroots workers are aware of discrepancies but are too powerless to do anything about them. What about the NGOs and higher state officials? To attempt to answer the empirical puzzle about why there is such a gap official and displaced people’s discourse, we need to consider the following aspects:

1) Measures and Methodologies

As discussed in the first section, there are different ways to conceive poverty/ ill-being and state discourse has largely resorted to the more conventional and economic one. It has also gained support from academic institutions such as The Centre for Social Studies (CSS) in Surat that monitored and evaluated the resettlement process in Gujarat until 1997. Each of their half yearly reports concentrates on a different aspect of resettlers’ lives and gives statistical data on all the sites in Gujarat. They have tended to look at well-being through material and tangible factors that can be easily measured (i.e. the core factors in figure 1). Whitehead (1999) however criticises this type of analysis because it does not show the huge discrepancy in the standard of living between the 180 resettlement sites that exist in

¹¹ Indeed their hard work on the land has led to its value increasing from Rs13,000 per acre to Rs71,000 in just a decade.

Gujarat¹². By using this conventional methodology as the basis to evaluate the resettlement program, the government reduces its chances of recognising the more multidimensional dimensions of well-being or indeed individual sites or cases where improvements need to be made. By resorting to dominant modes of enquiry, dominant interests are represented which are silent about hidden costs and intangible issues entering into the socio-cultural domain (cf. Kabeer 1994; Mehta and Srinivasan 1999). Market biases in valuing costs and benefits are also displayed. But markets are not neutral but ideological sites laden with social and power relations, thus land in Central Gujarat is probably valued more than adivasi land in the forest. It is therefore impossible to fairly measure intangibles such as the loss of the river or forest, which are non-monetised and never entered the market-place in the first place. Furthermore these notions of value have been constructed around the dominant discourses around development and not within the history, ecology, political and socio-cultural setting within which they are embedded for Adivasis.

2) *Narratives and Dominant Discourses of Development*

According to Emery Roe (1991) a development narrative is a story which has a beginning, a middle and an end and has a programmatic character to get its listeners to do something or believe in something. There are many narratives around the displacement of adivasis in Gujarat. Some for example draw on notion of their 'backwardness' and 'wilderness' and argue that resettlement processes are the only way to help them reap the benefits of modernity. 'Resettlement is development' is a popular slogan in Gujarat. These narratives give health workers, officials and high-level bureaucrats the illusion that the pains of displacement can actually rapidly become gains during resettlement and rehabilitation processes. Their adherence to economic and reductionist models of well-being also fail to help them comprehend the water/well-being nexus.¹³ Similarly, the narrative that dams are

¹² For responses to this article and to follow the debate on methodology see Shah (1999) and also Whitehead (2000).

¹³ For example, it is argued that the consumption patterns of resettlers have changed and there is a greater use of goods such as electric fans, motorcycles, televisions etc. This may be true but it also needs to be said that resettlers do not have money to visit relatives around the Narmada, money to buy milk, ghee and fresh vegetables which they got virtually free of cost in their forest environment. The lack of the latter has led to their isolation and poor health.

necessary because otherwise all river water would flow 'waste' into the sea justifies technico-engineering world views and discounts the ecological perception that the river is the lifeblood of an ecosystem.

These, however, are charitable interpretations. The more harsh interpretation would contend that there is a certain instrumentality and intentionality in bureaucratic indifference towards adivasis' ill-being. There is ample evidence to show that dam-based development, as represented by the SSP, can lead to an unjust spread of pains and gains and the colonisation of rivers and their people. The political economy of dams and large-scale irrigation is well known. Clearly, very powerful interests and lobbies are being served all over Gujarat (cf. Mehta 2001). Unholy institutional alliances have emerged between politicians, bureaucrats, social workers, academics across the state to give rise to the one dominant discourse of water, namely there is no alternative to the SSP (TINA) (ibid). The displacement of Adivasis is seen as a small price to pay for the promise of water to drought-prone Kutch and Saurashtra.¹⁴ Consequently, debates concerning alternative broader ways to view water and rivers and the water/ well-being links are being suppressed. In these ways, dam-based-development has emerged as a powerful discourse of development (cf. Escobar 1995) with a totalising effect on water management debates in the region. Vigilance is required to investigate the socio-political interests that are being served by these particular discourses of water, rivers and dams.

It can also be said that the discourses of discontent being put forward by the tribals is often counter-productive. According to Kibreab "Instead of working to develop roots in the new place, their aim becomes to return to the (area) of origin from where they were forcibly uprooted" (1999, 389). Such sentiments make assimilation in the new home difficult. It can also be argued that the resettlers exaggerate their problems and their complaints should be treated as particular representations. But these sentiments of discontent or (representations)

¹⁴ For detailed analyses of how these dominant discourses of water have essentialised and naturalised the phenomenon of water scarcity in Gujarat, see Mehta 2000 and Mehta 2001.

need to be viewed in conjunction with the symbolic and material interests and resources that help create them in the first place.

3) The Dynamics of Compliance and Resistance

Of course, the hegemony of dams-based-development has been challenged in many ways, especially by the urban and rural activists of the Narmada Bachao Andolan (Save the Narmada Movement). Many Adivasis, especially in Maharashtra and Madhya Pradesh have over the years refused to move out from their ancestral homes and have faced the rising waters of the river despite police repression. Their protest has in many ways led to improvements in resettlement programmes. But many of these protesters are still to see gain. Today some of them live in villages overlooking a dammed reservoir that can barely sustain them. No wonder then that some families in Manibeli, once a stronghold of protest, are showing signs of resistance fatigue and are now resigned to move to the plains.

The adivasis in Gadher never actively resisted the project in the early years. Unlike their cousins in Manibeli and elsewhere, they sadly but reluctantly left their ancestral homes for Gujarat, some filled with hopes for a better future influenced by the promises of Gujarati NGOs such as the Arch Vahini. In Malu at least, that dream has gone sour. They have experienced impoverishment, poor health and a diminishing sense of well-being. A minority has returned to Gadher with their livestock and now live in a half empty village and makeshift homes which they feel is a better option to life in the plains. Not all people can be so openly defiant. Those who remain offer covert forms of resistance. We are tempted to view their complaining and dissatisfaction as their everyday weapons (cf. Scott 1985). They offer resistance by refusing to forget the river and the life of Gadher. These tiny acts of resistance serve as a reminder to the callous state that their removal from Gadher took place without consultation, free informed and prior consent, and often through gross human rights violations.

The interplay of acquiescence and covert resistance in Malu and other settlements has led to some positive outcomes for the resettlers. In the past few years, the Nigam has been forced

to respond to the pressure of the anti-dam activists and at least at the de jure level certain policies and programmes have improved, e.g. the mechanisms for grievance redressal. Thus, in these different ways groups that originally acquiesced are now offering resistance in subtle ways which will hopefully allow their perceptions of well-being/ water to be taken seriously. For their struggle over water is not only one of access; it is one of meaning too.

Bibliography and References

- Basu, S (ed.) (1990), *Tribal health in India*, Delhi: Manak Publications.
- Baulch, Bob, (1996). *Editorial. The New Poverty Agenda. A Disputed Consensus*. IDS Bulletin, Vol 27 No 1. pp 1-9, Brighton: IDS.
- Baviskar, A. (1995), *In the Belly of the River*. Tribal Conflicts over Development in the Narmada Valley. Delhi: Oxford University Press.
- Biswas. A. (ed.) (1995), *Handbook of Water Resources and Environment*. London: McGraw Hill.
- Bourdieu, Pierre. (1977), *Outline of a Theory of Practice*. (Translated from the French by Richard Nice). Cambridge: Cambridge University Press.
- Cernea, Michael. (1997), The Risks and Reconstruction Model for Resettling Displaced Populations. *World Development*. 25: 10. pp1569-1587.
- Colson, E. (1999), Engendering those uprooted by 'Development', in Indra D. (ed.). *Engendering Forced Migration: Theory and Practice*. Oxford: Refugee Studies Program.
- Centre for Social Studies (CSS) (Various Years), *Resettlement and Rehabilitation: Sardar Sarovar Project on the Narmada*. Various Reports, CSS: Surat.
- Chambers, R. (1995), "Poverty and livelihoods: whose reality counts" in Environment and Urbanisation, Human settlements Programme Vol.7 no. 1 pp137-204, London: IIED.

De Haan, Arjan, and Maxwell, Simon, (1998), Poverty and Social Exclusion in North and South, editorial, in *"Poverty and Social Exclusion in North and South"*, IDS Bulletin, Vol 29 No 1, pp 1-9. Brighton: IDS

Dreze, J, Samson, M & Singh, S (eds.) (1997) *The Dam and the Nation; displacement and resettlement in the Narmada Valley*, Delhi:Oxford University Press.

Foucault, Michel (1980), *Power/Knowledge. Selected Interviews and Other Writings 1972-77.* (Edited by Colin Gordon), Brighton: Harvester Press.

Giri, A.K (2000), "Rethinking Human Well-Being: A Dialogue with Amartya Sen in *Journal of International Development*, Vol 12. pp1003-1018.

Hakim, R. (1997), 'Resettlement and Rehabilitation in the context of 'Vasava' culture in Dreze et al (ed.), *The Dam and the Nation. Delhi: Oxford University Press.*

Hardiman, D (1997) *Feeding the Banyan*, Delhi, Oxford University Press.

Hardiman, D (1995) *The Coming of the Devi*, Delhi: Oxford University Press.

Indra, D. 1999. 'Not a room of one's own' in Indra (ed.), *Engendering Forced Migration: Theory and Practice*. Oxford: Refugee Studies Program.

Indra, D (ed.) (1999), *Engendering Forced Migration: Theory and Practice*. Oxford: Refugee Studies Program

Kabeer, N, (1991), *Gender Production and Well Being: Rethinking the Household Economy*, IDS Discussion Paper 288, Brighton: IDS.

Kabeer, N. (1994), *Reversed Realities. Gender Hierarchies in Development Thought*. London: Verso.

Kabeer, N, (1999), Resources Agency, Achievements: Reflections on the Measurement of Women's Empowerment, in "*Gendered Poverty and Well-being*", *Development and Change* Vol 30 No 3, pp 435-464.

Kibreab, G (1999), "Revisiting the debate on People, Place, Identity and Displacement" in *Journal of Refugee Studies* Vol.12 no.4 pp384-410.

Macdowell, C. (ed). (1997), *Understanding Impoverishment. The Consequences of Development-Induced-Development*. Oxford: Berghahn.

Mahapatra, K.L (1990) "Concept of health among the tribal population groups of India and its Socio-economic and Socio-cultural correlates, in *Basu, S (ed.) (1990), Tribal health in India*, Delhi: Manak Publications.

Mehta, Lyla. (2001), "The Manufacture of Popular Perceptions of Scarcity in Gujarat, India. Dams and Water-related Narratives" in *World Development*.

Mehta, Lyla . (2000), Drought Diagnosis. Dryland Blindness of Planners. *Economic and Political Weekly*. July 1-7.

Mehta, Lyla and Srinivasan, Bina, (2000), *Balancing Pains and Gains. A Perspective Paper on Gender and Large Dams*, Final paper prepared for the World Commission on Dams.

Mosse, D (1997) "The symbolic making of a common property resource: history, ecology and locality in a tank-irrigated landscape in south India" in *Development and Change* Vol.28 no.3 pp467-504.

Nussbaum, Martha and Glover, Jonathan, (eds), 1995, "*Women, culture and development: A study of human capabilities*", Clarendon Press, Oxford

Nussbaum, M and Sen A (eds.) (1993), *The Quality of life*, Oxford, Clarendon Press.

Nyerges, A Endre. (1997), 'Introduction – The Ecology of Practice.' in Nyerges, A Endre. *The Ecology of Practice. Studies of Food Crop Production in Sub-Saharan West Africa*. Food and Nutrition in History and Anthropology, Volume 12. Amsterdam: Gordon and Breach Publishers.

Parasuraman, S. (1993), '*Impact of Displacement by Development Projects on women in India*'. Working Paper Series No. 159. The Hague: Institute of Social Studies.

Pocock, D.F (1973), *Mind Body and Wealth; A study of Belief & practise in an Indian Village*. Oxford: Blackwell.

Razavi, Shahra, (1999), Gendered Poverty and Well-Being, in '*Gendered Poverty and Well-being*', Development and Change Vol 30 No 3, pp 409-433, July

Sah, D.C (1999) "Selectivity and Bias: Recent Reporting on Sardar Sarovar Project" in *EPW* Vol 34 no.51 December 18.

Schaffer, Paul. (1996) *Beneath the Poverty Debate: Some Issues*. IDS Bulletin Vol 27 No 1. pp 23-36, Brighton: IDS.

Scott, James. (1985), *Weapons of the Weak. Everyday Form of Peasant Resistance*. New Haven: Yale University Press

Scott, James, C., (1998), *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale: Agrarian

Scudder, T. (1995). Resettlement. In Biswas, A. (ed). *Handbook of Water Resources and Environment*. McGraw Hill.

Sen, A (1999). *Development as Freedom*, Delhi, Oxford University Press.

Sen, A (1993), "Capability and Well-being", in Naussbaum, M and Sen A (eds.), *The Quality of life*, Oxford, Clarendon Press.

Sen A (1985), *Commodities and Capabilities*, Amsterdam, North- Holland Press.

Swain, S (1990), Health, Disease and seeking Behaviour of Tribal people of India in Basu, S (ed.) (1990), *Tribal health in India*, Delhi: Manak Publications.

Thukral, E. (1996). 'Development, Displacement and Rehabilitation: Locating Gender'. *Economic and Political Weekly*. Vol. 31. no.24: 1500-1503.

Tata Institute of Social Studies (TISS) (Various Years), *Monitoring and Evaluation of Resettlement and Rehabilitation of Sardar Sarovar Displaced in Maharashtra*. Various Reports. Bombay: TISS.

Whitehead, J (1999), "Statistical concoctions and Everyday Lives" in *EPW* Vol34 no.28 July 10-16

Whitehead, J (2000), "Monitoring of Sardar Sarovar Restettlees; A further critique" in *EPW* Vol 35 no.25 November 4.